

REMARKS

Claims 16-37 are now in this application.

In paragraph 2 of the Office action the examiner objected to claims 28 and 29, saying that “the connection” in claim 28 and “the yielding region” in claim 29 do not have proper antecedent basis. The examiner apparently did not notice that claim 27 has the same issue as claim 29. The examiner has also pointed out that in claim 28 “absorbs” had been misspelled.

As can be seen, the issues with respect to claim 28 have been corrected by amending both claims 16 and 28.

Claim 29 has been corrected by changing its dependency to claim 25.

The issues with respect to claim 27 have been corrected by providing a new claim 37, which is basically a duplicate of claim 25 except that it depends on claim 18, and claim 27 has been made dependent on this new claim 37. This gives a second claim which recites the yielding region, and provides antecedent basis for the yielding region in claim 27.

Under prior art the examiner has rejected:

claims 16, 18, 19, 21, 25, 26, 30, 31 and 35 as anticipated by Weiland,
claim 28 as unpatentable over Weiland in view of Advolotkin et al.,
claims 17 and 20 as unpatentable over Weiland in view of Sato et al.,
claims 22, 27 and 32 as unpatentable over Weiland in view of Beeh,
claims 23 and 24 as unpatentable over Weiland in view of Nagate et al.,
claim 29 as unpatentable over Weiland in view of Beeh and Advolotkin et al.,
claim 33 as unpatentable over Weiland in view of Sato et al. and Advolotkin et al.,

claim 34 as unpatentable over Weiland in view of Denk et al., and
claim 36 as unpatentable over Weiland in view of Beeh.

With regard to the examiner's rejection of claims 25 and 26 as anticipated by Weiland, clearly this rejection is not warranted because Weiland's disks cannot be considered to be resilient. Weiland speaks of the disks being made of iron, which is not a resilient material. Weiland also recites the disks to be approximately .5 mm thick, which even further argues against their being resilient. If iron of this thickness flexes too much or too often, it will break, it will not continue to flex. Thus, while the examiner can say that Weiland's disks may flex, they are not within the meaning of the word resilient which is used within these claims to describe and limit applicants' disks. Resilient, according to Webster, is being "able to recoil or spring back into shape after bending, stretching, or being compressed". Iron does not have this property. If bent, it stays bent. If stretched, it stays stretched.

Claims 25 and 26 also add details of the mounting structure which even further allows for the differential thermal expansions. And contrary to the examiner's indication, Weiland does not teach the yielding region or that the yielding region comprises a bead as recited in claims 25 and 26.

It is axiomatic that if all of the structure which is recited in a claim is not taught by a single reference, then it is not proper to reject such a claim under 35 USC 102. And since Weiland clearly does not teach any bead, and certainly not a bead as part of the yielding region, it was not proper for the examiner to reject claim 26 under 35 USC 102.

As mentioned above, Weiland has absolutely no teaching of a bead extending in the circumferential direction. For the examiner to indicate, as he has, that the “yielding region” can constitute a bead, with no teaching of such a bead in Weiland, is a completely improper reading of the reference by the examiner, and is simply not correct. Even the wording of the rejection, that the yielding region **can** constitute a bead implies that the bead is not there. Thus even the wording of the examiner’s rejection clearly indicates that this rejection is not proper.

Claims 30-31 depend on claims 25 and 26 respectively and are also rejected as anticipated by Weiland. Thus the rejection of these claims must fail for the same reasons as the rejection of claims 25 and 26. In addition, these claims include even further details of the yielding region which Weiland does not teach. In particular, claims 30 and 31 add that the yielding region is a connecting region, which is inclined to the securing region. Such structure is not shown by Weiland, and since it is not in any way taught by Weiland, the rejection under 35 USC 102 is not a proper rejection.

And again with regard to claim 27, which stands rejected as unpatentable over Weiland in view of Beeh, the examiner has indicated that Weiland includes a bead. But there is no structure in Weiland which can be considered to be a bead. Likewise, there is no structure in Beeh which can be considered to be a bead. Clearly then, the rejection of claim 27 is not an appropriate rejection, as the prior art, Weiland in view of Beeh, does not include teachings of all the structure which is recited in claim 27. These references, singly and/or in

combination, do not teach the bead as recited in claim 27 and thus the structure of claim 27 clearly is not obvious over this prior art.

And claim 32, which is rejected as unpatentable over Weiland in view of Beeh, recites that the covering disks have a slit which extends from the outer circumference to the yielding region. Again, Weiland does not teach such a slit, and neither does Beeh. The closest to this structure is in Beeh which has slots 11. But these slots do not join to anything like a yielding region. The disks of Beeh are steel and are clearly not meant to be resilient; they are not meant to allow any bending or resilience whatsoever. Like Negate et al. the slots of Beeh are meant for controlling magnetic flux. Within Beeh the disks 5 are completely rigid, thus there is no yielding region, so there can be no slits which extend from the outside to “the yielding region” as recited in claim 32.

With regard to the rejection of claims 23 and 24 as obvious over Weiland in view of Nagate et al., the examiner has now relied on Nagate et al. to show slits of different lengths. Indeed, it is true that Nagate et al. show **slots** of different length in figure 6. The examiner has indicated in his rejection that slits of different lengths could be provided to absorb thermal expansions. But the slots of Nagate et al. are not used for absorbing thermal expansions, and in fact they are not even used in any way to help support the magnets. The magnets 30 of Negate et al. are mounted within slots 25, and the slots 33 as shown in figure 6 have nothing whatsoever to do with mounting the magnets. In fact, Nagate et al. clearly recite that their slots 33 are for the purpose of shunting and/or directing the magnetic flux. They are not for absorbing thermal expansions and they are not meant for any mounting purposes. For

the examiner to indicate that the flux directing slots of Nagate et al. could somehow be used as a teaching to be combined with Weiland as a means for mounting the magnet, and even further for constituting a means for absorbing thermal expansion is a clear case of the examiner using hindsight.

Weiland's mounting structure has no slits. Simply seeing slots for an entirely different purpose and somehow jumping to the conclusion that flux directing slots could somehow be used to aid in mounting the magnet is clearly well beyond the meaning of obviousness under 35 USC 103.

Paragraphs 9, 10 and 31 of the specification give a clear description of how this claimed detail gives unexpected and advantageous results. With this in mind it becomes abundantly clear that the examiner's rejection based on Weiland in view of Nagate et al. is based on improper hindsight, particularly since Weiland's disks have no slits, and the disks of Weiland are not at all used for directing the magnetic flux. Thus there is no nexus between the disks of Weiland and those of Nagate et al. and accordingly there is no reason whatsoever, other than the examiner's attempt to bring these two together, why a person skilled in the art would try to modify Weiland's disks in view of those of Nagate et al.

There just simply is no logical reasoning for combining Weiland and Nagate et al. under 35 USC 103 as the examiner has done.

Clearly in opposition to the examiner's rejection of claims 23 and 24, the prior art does **not** show slits of different lengths in the covering disks used for absorbing thermal expansion. However, since paragraphs 9, 10 and 31 of the specification recite specific

advantages for the differing lengths of the slits, and the references to Weiland and Nagate et al. do not provide anything close to a roadmap as to why one would combine these two references, it is not proper for the examiner to dismiss this limitation in such a cavalier fashion. As pointed out in the specification, in the past it has been very difficult, if not impossible, to use rare earth magnets in a device such as applicants. And these paragraphs of the specification set forth that these differing lengths of the slits gives the unexpected and particularly advantageous results which now make it possible to use rare earth magnets. These slits of differing lengths unexpectedly provide a much better absorption of, and compensation for, the differing thermal expansion of the rare earth magnets with respect to the rest of the structure surrounding them.

With regard to the examiner's rejection of claims 28 and 29, which are rejected as unpatentable over Weiland in view of Advolotkin et al. or else as unpatentable over Weiland in view of Beeh and Advolotkin et al., the examiner has read sections 9 of Advolotkin et al. as being "U" shaped. But clearly ribs 9 of Advolotkin et al. are not "U" shaped, but rather they are part of a very shallow, or straightened out "S" shape. There is no part of the ribs 9 which can properly be said to be "U" shaped, as there is no part of ribs 9 which curve back on themselves.

And even further, these ribs are certainly not part of a covering disk. Instead they are part of internal disks. Thus there is no reasoning which can properly bring one skilled in the art to combine the teachings of the disks of Advolotkin et al. with the disks of Weiland, since one reference has internal disks and the other has external disks.

The examiner's rejection of present claim 33 is based on Weiland in view of Sato et al. and Advolotkin et al. It does appear that Advolotkin et al. do teach a carrier body 2 with small gaps between it and the magnet and disks. But Advolotkin et al. still does not teach the same structure as is recited in claim 33. Because of the recited "very" small gaps it is believed that the combination of references applied against claim 33, including Advolotkin et al., does not teach the structure which is recited in claim 33.

However, even with the above in mind, claim 33 has been revised so that it now recites even more structure which is not taught by the cited prior art. These newly added details of structure in claim 33 include that the gaps are "very" small, and that adhesive is used to secure the disks to the ring magnet. These details allow for the use of rare earth magnets in a motor such as disclosed in this application. Paragraphs 2, 4, 29 and 32 of the specification speak of the gap being very minimal. These paragraphs also detail the particular advantages that such structure provides for the present invention. In particular, these details, that the gaps are very small allows for relative displacement between the ring magnet, the carrier body, and the covering discs. This kind of relative movement, which happens, for example, because of thermal expansion, is not possible in a device such as that of Advolotkin et al.

These details and their advantages are clearly not present in the prior art cited against claim 33, including Weiland, Sato et al., and Advolotkin et al. Thus claim 33 is clearly allowable over the prior art.

Claim 36, which has been rejected as unpatentable over Weiland in view of Beeh, recites a combination of the limitations found in claims 16, 25, 30 and 32. Thus, as explained above with respect to these claims, claim 36 recites a combination of the details of this invention which is not taught or made obvious by the prior art, Weiland in view of Beeh, which has been applied against this claim.

The iron disks and annular groove in the permanent magnet body of Weiland, conversely to what is recited in claim 36, indicates away from elastic covering discs and any possible relative motion between the ring magnet and the armature shaft. Within the teachings of Weiland, the solid connection of the hubs 5 to the annular groove of the ring magnet does not allow for any temperature compensation.

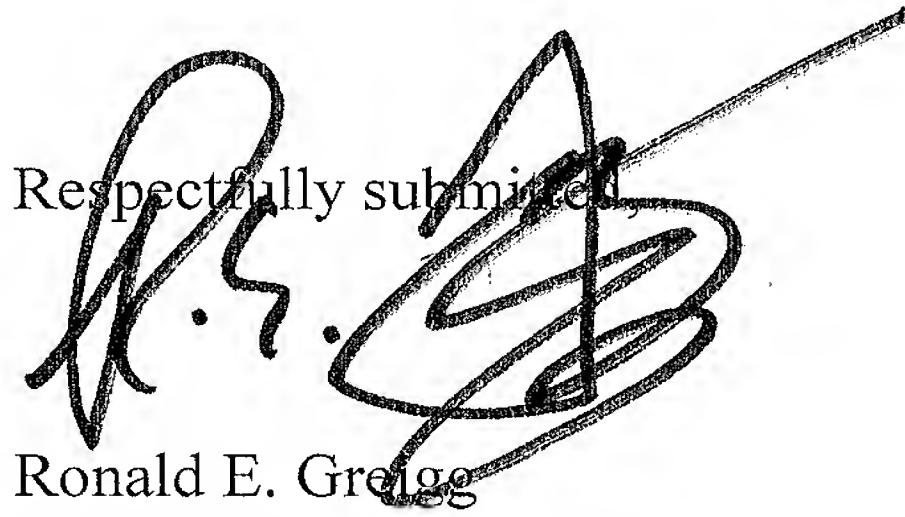
Moreover, it makes no sense whatsoever to combine the references to Weiland and Beeh as the examiner has done in the rejection of claim 36. Weiland has a ring magnet, and Beeh teaches a plurality of bar magnets 2 combined with yokes 9. The bar magnets and yokes of Beeh make for an entirely different structure than a ring magnet such as Weiland's, so that it is not seen what, if any, relationship there is between the mounting structure of Beeh and that of Weiland. Since the magnets of the references are of an entirely different shape and have an entirely different configuration, there is no reason a person skilled in the art would look to the mounting structure of one to modify the mounting structure of the other. In fact, the mounting structure of one could not be used to mount the other without a plethora of further, non-obvious modifications.

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Reply to Office action of November 24, 2009

For all of the above reasons, whether taken singly or in combination with each other, entry of this amendment and allowance of the claims are courteously solicited.

The Commissioner is authorized to charge payment for the twenty second claim in excess of twenty (the twenty first claim has already been paid for), or any other necessary fees in connection with this communication, to Deposit Account Number 07-2100.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R.E. Greigg', is written over the words 'Respectfully submitted,'.

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